

Appl. No. 09/835,007
Response Dated 06/15/2005
Reply to Office communication of 05/16/ 2005

Amendments to the Specification:

Please replace the text following the heading "CROSS-REFERENCE TO RELATED APPLICATIONS" on page 2 with the following amended text:

This application is a continuation-in-part application of the following pending U.S. Patent applications:

Serial No. 09/560,131 filed April 28, 2000, now issued as U.S. Pat. 6,744,914;

Serial No. 09/560,132 filed April 28, 2000, now issued as U.S. Pat. 6,771,809;

Serial No. 09/560,583 filed April 28, 2000, now issued as U.S. Pat. 6,738,508;

Serial No. 09/560,645 filed April 28, 2000, now issued as U.S. Pat. 6,728,423;

Serial No. 09/560,644 filed April 28, 2000, now issued as U.S. Pat. 6,413,084;

Serial No. 09/560,584 filed April 28, 2000, pending.

The entire contents of each of the above patent applications is incorporated by reference herein.

Please replace the text following the heading "ABSTRACT" on page 116 with the following amended text. The replacement abstract is presented in the Annex attached to this paper.

A method and system are provided for constructing a virtual three-dimensional model of an object using a data processing system, and at least one machine-readable memory accessible to ~~[[said]]~~ the data processing system. A set of at least two digital three-dimensional frames of portions of the object are obtained from a ~~source, such as a computing system coupled to an optical or laser scanner, CT scanner, Magnetic Resonance Tomography scanner or other source. The at least two frames comprise~~

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comprising a set of point coordinates in a three dimensional coordinate system providing differing information of the surface of the object. The frames provide a substantial overlap of the represented portions of the surface of the object, but do not coincide exactly ~~for example due to movement of the scanning device relative to the object between the generation of the frame.~~ Data representing the set of frames are stored in the memory. ~~The data processing system processes the data representing the set of frames with said and processed by the~~ data processing system so as to register the frames relative to each other to thereby produce a three-dimensional virtual representation of the portion of the surface of the object covered by [[said]]the set of frames. ~~The registration is performed without using pre knowledge about the spatial relationship between the frames. The three dimensional virtual model or representation is substantially consistent with all of the frames.~~